

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-7 are pending in this application. Claims 4, 5, and 7 stand withdrawn from consideration as directed to a non-election invention. Claims 1-3 and 6 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application Publication 2002/0036443 to Akiba et al. (herein "Akiba") in view of JP 2001-069383 to Tadao. That rejection is traversed by the present response as discussed next.

Initially, applicants note each of independent claims 1 and 6 is amended by the present response to clarify features recited therein. Specifically, independent claim 1 clarifies the image pickup device is disposed on the image pickup device region "on the flexible substrate" and that the stationary unit attaching portions are also disposed "on the flexible substrate". Those claim features are believed to be clear from the original specification, see for example original Figures 1, 2A-2D, and 3, and the discussion in the present specification at page 11, line 17 et seq.

As noted in Figures 1, 2A-2D, and 3 in the present specification as a non-limiting example, a stationary unit frame 11 can be attached to stationary unit attaching portions 32 of the flexible substrate image pickup device region 30 by engaging with engagement sites provided at the stationary unit attaching portions 32, and that extend in a predetermined direction (see for example Figures 2A, 2B, and 3). Further, in the claimed invention a flexible substrate 20 is bent along a bending portion α , β between the electrode region 50 and an image pickup device region 30, the electrode region 50 being engaged with an engagement site provided on a side of the stationary unit frame 11 so as to be fixed inwardly thereof (see for examples Figures 2C and 2D). The claimed structure allows an optical adjustment to be

executed accurately at a time of a stationary unit assembly, and also allows a size of a camera unit to be reduced by reducing a number of parts.¹

The claims as written are believed to clearly recite features that distinguish over Akiba in view of Tadao, as now discussed.

The outstanding rejection relies on Akiba to disclose a stationary unit frame 3, 3A that is attached to an image pickup device region on a fixed plate 17. In for example Figure 4A in Akiba an image pickup device 18 is mounted on that fixed plate 17, as is the stationary unit frame 3A.

The claims as written are believed to clearly distinguish over Akiba in that Akiba does not disclose or suggest any feature of the “flexible substrate” recited in the claims, including the different attachments thereto.

In the claimed invention, and with reference to Figures 1, 2A-2D, and 3 in the present specification as a non-limiting example, the flexible substrate 20 includes an image pickup device region 30 on which an image pickup device 31 is mounted, and that image pickup device region 30 also includes attachment portions 32 for a stationary unit frame 11. Further, the flexible substrate includes electrode regions 40 and 50.

In the claimed invention, the stationary unit 11 is attached to the stationary unit attaching portions 32 of the flexible substrate, and thus the stationary unit 11 is formed above the image pickup device 31 formed on the image pickup device region 30.

The only way Akiba could even possibly be corresponded to the claimed features would be to incorporate the claimed “flexible substrate” for the fixed plate 17 in Akiba. That results because the fixed plate 17 in Akiba is cited to include the image pickup device region, which as claimed is clearly on the flexible substrate, and is the element to which the noted

¹ See for example the discussion in the present specification at page 12, line 10 et seq. as an example.

stationary unit 3, 3A is attached via attaching portions, which the Office Action states are inherent in Akiba.

As recognized in the Office Action Akiba does not disclose a flexible substrate, but the outstanding rejection relies on Tadao for that disclosure.

Thereby, applicants submit a first hurdle for a possible proper grounds for the outstanding rejection would be if one ordinary skill in the art would replace the fixed plate 17 in Akiba with the noted flexible substrate of Tadao, and a second hurdle for a possible proper rejection would be such a combination meets all the claims limitations. Applicants submit such a combination of teachings first would not have been suggested to one of ordinary skill in the art. Applicants also submit such a combination would not even meet all the claim limitations.

In Akiba the element 17 is clearly a fixed plate to which different elements are mounted, and thereby is a support element. The noted flexible substrate 2-4, 6, and 8 in Tadao is not directed to any even similar device as the fixed plate 17 operating as a support, but instead is used for arranging a printed circuit board around an already-built camera body. Applicants submit one of ordinary skill in the art clearly would not have incorporated such elements 2-4, 6, and 8 in Tadao for the fixed structural plate 17 in Akiba. Thereby, the claim features would not have been realized.

Further, the claims clearly recite the “flexible substrate” includes an electrode region and an image pickup device region formed on the same surface thereof. The noted flexible substrate of elements 2-4, 6, and 8 in Tadao clearly does not have such a structure.

Moreover, in the claims the “flexible substrate” is recited as bent along bending portions, and such that an electrode region thereof engages with an engagement site provided “on a side of the stationary unit frame so as to be fixed inwardly thereof”. No combination of

the elements 2-4, 6, and 8 in Tadao to the structure in Akiba would result in such claim features.

Moreover, in the structure disclosed in Akiba it is necessary to work components with high accuracy to accurately position the components. In contrast, in the claims since a flexible substrate is used, a fine adjustment becomes possible, and a high working accuracy is not required.

Specifically, a rather high working accuracy is required for putting different components together, in particularly for putting together the image pickup device region 30 with the CCD 31 mounted thereon, the electrode regions 40 and 50 for moving an actuator, the stationary unit frame 11, using the attaching portions 32. Without components of a high working accuracy, a misalignment may occur, and an excellent assembly would not be able to be realized.

To address such a situation in the claimed invention, since the portions between the image pickup device region 30 and the electrode regions 40 and 50 are part of a flexible substrate and thus can be freely moved as shown for example in Figures 2A-2D and Figure 3 in the present specification, a misalignment can be avoided, and thereby assembly becomes easier.

Thus, with the claimed structure electrode regions 40 and 50 of a flexible substrate can be moved flexibly along an optical axis relative to the stationary unit frame 11, and even when positions of the electrode regions 40 and 50 are slightly deviated from correct positions, that deviation can be corrected for, so that there is no adverse influence on the occurrence of a force for driving movable units 60 and 61. That is, as the distance between the electrode regions 40 and 50 is to be accurately set to provide the driving force for driving the movable units 60 and 61, such an accurate setting of the distance can be realized by accurately positioning the stationary unit frame with respect to the image pickup device 30. The

claimed invention allows such an accurate positioning by the noted stationary unit attaching portions, which are disposed on the flexible substrate at positions surrounding the image pickup device region.

Clearly neither Akiba nor Tadao address such a structure as claimed, nor do Akiba and Tadao even realize the benefits in the claimed invention.

In view of the foregoing comments, applicants respectfully submit no combination of teachings of Tadao and Akiba would have been suggested to one of ordinary skill in the art, and such a combination of teachings would not even fully meet all the claimed features.

Applicants also note the presence of withdrawn claims 4 and 5 in the present application. Those claims stand withdrawn from consideration, but those claims directly or indirectly depend from independent claim 1. Thereby, independent claim 1 is clearly generic to each of claims 4 and 5. As independent claim 1 is believed to be allowable for the reasons discussed above, applicants respectfully submit claims 4 and 5 should now be reinstated. Thereby, allowance of each of claims 1-6 in the present application is believed to be proper.

In view of the foregoing comments, applicants respectfully submit each of the claims as currently written patentably distinguishes over Akiba in view of Tadao.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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